REMARKS/ARGUMENTS

Claims 1-18 are pending in the present application. Claims 1, 5, and 10 were amended. By this amendment no claims were canceled or added. Reconsideration of the claims is respectfully requested.

Claims 1, 5, and 10 were amended to correct minor typing errors.

I. 35 U.S.C. § 103, Obviousness: Claims 1, 5, 7, 10, 14, and 16

The Examiner has rejected claims 1, 5, 7, 10, 14, and 16 under 35 U.S.C. § 103 as being unpatentable over Reshef et al., Method and System for Protecting Operations of Trusted Internal Networks, U.S. Patent No. 6,321,337, November 20, 2001 (hereinafter "Reshef") in view of Pettey et al., Inifiniband Channel Adapter for Performing Direct DMA Between PCI Bus and Inifiniband Link, U.S. Patent No. 6,594,712, July 15, 2003 (hereinafter "Pettey"). This rejection is respectfully traversed.

The Final Office Action states:

> a. As per claims 1 and 10, Reshef teaches: pre-posting command buffers, wherein the buffers contain external small computer system interface commands (lines 19-45 of column 16): receiving a command (lines 44-60 of column 6); translating the command to form a translated command, and sending the translated command to the device (lines 9-1 8 of column 13); and performing the new translated command within the internal subnet (lines 19-26 of column 13).
>
> Reshef does not explicitly teach: InfiniBand isolation bridge and InfiniBand host system. However, Pettey discloses: "In another aspect, it is a feature of the present invention to provide an Infiniband channel adapter that includes a bus router that receives an Infiniband RDMA Read Response packet, having a payload of data, transmitted by a remote Infiniband node," (li~nes2 9-33 of column 3). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to include an InfiniBand isolation bridge and InfiniBand host system. "The channel adapter also includes a local bus interface, in communication with the bus router, that provides the payload of data to an I10 controller coupled to the local bus interface by a local bus if a local bus address specified by the I10 controller is within a predetermined address range of the local bus address space," (lines 33-38 of column 3 in Pettey). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to include an InfiniBan isolation bridge and InfiniBand host system functionality in the system as taught by Reshef.

Final Office Action dated April 7, 2006, pages 2-3.

The Examiner bears the burden of establishing a *prima facie* case of obviousness based on the prior art when rejecting claims under 35 U.S.C. § 103. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). When comparing Reshef to the claimed invention, the claim limitations of the presently claimed invention may not be ignored in an obviousness determination.

Independent claim 1 of the present invention, which is representative of independent claim 10 with regard to similarly recited subject matter, recites:

> 1. A computer implemented method for facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure, the method comprising:
> pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands;
> receiving a command from the InfiniBand host system;
> translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure; and
> performing the translated command.

Reshef does not teach or suggest the features recited in claim 1. Claim 1 is directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Claim 1 utilizes an InfiniBand isolation bridge. The Final Office Action acknowledges, and Applicants agree, that Reshef does not teach an InfiniBand host system, a device with an internal InfiniBand bus structure, an InfiniBand isolation bridge, or facilitating communication between the InfiniBand host system and the device with an internal InfiniBand bus structure. Instead, Reshef teaches a security gateway between an untrusted computer system and a trusted computer system that also converts received messages into a simplified form for the trusted computer system to use. Reshef does not teach the features of "pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands," and "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure."

The Final Office Action points to column 16, lines 19-45, which is reproduced below for the Examiner's convenience, as teaching pre-posting command buffers, wherein the buffers contain external small computer system interface commands:

> The flow of data coming in to the security gateway **10** in application format through the protocol manager **2c** and **4c** is shown in FIG. 7. The data arrives in its native application format at step **500** and is read by the protocol manager **2c** and **4c** from the queue **210** containing data coming from the routing managers **2*b***, **4*b***. This application-format data is then transferred to the session manager **220** at step **510**. At step **520** the session manager **220** locates an available session handler **230**, and sends the data buffer to that session hander.
> At step **530**, the session handler **230** scans the sessions currently active or "open", to determine which session the data belongs to before sending the data to the corresponding session object **240** for processing. If the data does not belong to one of the

> open sessions, the session handler **230** initiates a new session object **240** and sends the data, all this comprising step **530**. The session object **240** begins by storing the data buffer in the object repository (OR) **300**, step **540**. The session object **240** then consults the PET **310** to get the identity of the next protocol entity **710** that should be used to process the data, reducing it to clear data in CIP format at step **550**. If other protocol entities are needed to process the data, then the data is handed on to the next protocol entity **710** for processing in step **560**, that protocol entity **710** retrieves the data from the buffer in the OR **300** and deposits the processed result there in step **570** when its process is complete.

Reshef, column 16, lines 19 through 45.

The above cited portion of Reshef, column 16, lines 19 through 45 does not teach pre-posting command buffers, wherein the buffers contain external small computer system interface commands. Instead, the above cited portion of Reshef teaches that a data buffer is transferred from a session manager to a session handler to a session object and that the session object stores the data buffer. Nowhere does the above cited passage teach commands or pre-posting commands to a buffer. Additionally, nothing in the above cited passage teaches that the buffers to which commands have been pre-posted contain external small computer system interface commands. Rather, the above cited passage of Reshef teaches about data buffers and how the data buffer and the data in the buffer are handled.

The Final Office Action points to column 13, lines 9-18, which is reproduced below for the Examiner's convenience, as teaching translating the command to form a translated command, and sending the translated command:

> For example, when a user invokes a CGI script on the web-server **12** using a CGI request encapsulated in HTTP transfer protocol, and the CGI script translates that request into an application format, e.g. SQL or banking, the web-server **12** transmits the application format back (e.g. SQL query, banking command) to the network-security gateway **10**, where the web proxy ***2f*** receives it and removes the TCP/IP encapsulation of the application data in step **94**, before sending the application data to the routing manager ***2b***.

Reshef, column 13, lines 9 through 18.

The above cited passage of Reshef teaches translating requests from one language into another language. However, claim 1 recites the features of "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure." Reshef does not teach this feature.

Pettey does not cure the deficiencies of Reshef. Pettey does not teach the features missing from Reshef including "pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands," and "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure." Pettey teaches architecture of an InfiniBand host channel adapter that deals with how the data is passed through an InfiniBand to PCI host channel adapter without the need for double buffering the data, which makes the data transfer more efficient. The Final Office Action cites Pettey for the purpose of teaching an InfiniBand host system and an InfiniBand isolation bridge. The Final Office Action cites Pettey, column 3, lines 29-33, reproduced below for the Examiner's convenience as teaching InfiniBand host system and an InfiniBand isolation bridge:

> In another aspect, it is a feature of the present invention to provide an Infiniband channel adapter that includes a bus router that receives an Infiniband RDMA Read Response packet, having a payload of data, transmitted by a remote Infiniband node.

Pettey, col. 3, lines 29-33.

The above cited passage of Pettey does teach an InfiniBand channel adapter. However, the above cited passage does not teach an InfiniBand isolation bridge, as an isolation bridge performs command translations, of which there is no mention in the above cited passage. Furthermore, the Final Office Action does not cite any portion of Pettey as teaching "pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands," or "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure."

Furthermore, stating that it is obvious to try or make a modification or combination without a suggestion in the prior art is not *prima facie* obviousness. The mere fact that a prior art reference can be readily modified does not make the modification obvious unless the prior art suggested the desirability of the modification. *In re Laskowski*, 871 F.2d 115, 10 U.S.P.Q.2d 1397 (Fed. Cir. 1989) and also *see In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992) and *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1993). The Examiner may not merely state that the modification would have been obvious to one of ordinary skill in the art without pointing out in the prior art a suggestion of the desirability of the proposed modification. The Examiner has not pointed to any suggestion in the prior art of the desirability of modifying Reshef to include Pettey. The Examiner has merely stated that it would

be obvious to include an InfiniBand host system and an InfiniBand isolation bridge with Reshef because the InfiniBand "channel adapter also includes a local bus interface, in communication with the bus router, that provides the payload of data to an I/O controller coupled to the local bus interface by a local bus if a local bus address specified by the I/O controller is within a predetermined address range of the local bus address space." This reasoning is merely a statement of part of the architecture of the Pettey invention and has nothing to do with the problem disclosed and solved by Reshef, the problem of a security gateway between an untrusted computer system and a trusted computer system that also converts received messages into a simplified form for the trusted computer system to use. Therefore, the Examiner has provided no motivation to combine the cited references. Therefore, the Examiner has failed to state a *prima facie* case of obviousness.

In determining whether a particular combination might be properly combined, whether it is obvious to try a combination is not a legitimate test. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988). The test is whether the combination of the references or modification would be obvious to do rather than obvious to try. *In re Clinton*, 527 F.2d 1226, 188 U.S.P.Q. 365 (C.C.P.A. 1976).

The present invention recognizes facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Reshef does not teach the problem or its source. Pettey does not teach the problem or its source. Instead, Reshef is directed towards a security gateway between an untrusted computer system and a trusted computer system that also converts received messages into a simplified form for the trusted computer system to use. Pettey is directed towards architecture of an InfiniBand host channel adapter that deals with how the data is passed through an InifiniBand to PCI host channel adapter without the need for double buffering the data, which makes the data transfer more efficient. Therefore, one of ordinary skill in the art would not be motivated to combine or modify the references in the manner required to form the solution disclosed in the claimed invention, as neither reference teaches the source or solution of the other reference or the source or solution of the problem addressed by the present invention.

Thus, the proposed modification of Reshef would not be made when Reshef is considered as a whole. "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art." *In re Hedges*, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986). Thus, when Reshef is examined as a whole, Reshef teaches one of ordinary skill in the art regarding a security gateway between an untrusted computer system and a trusted computer system that also converts received messages into a simplified form for the trusted computer system to use. Therefore, one of ordinary skill in the art would not be motivated to

make the Examiner's proposed modifications of combining Reshef with Pettey when Reshef is considered as a whole.

Therefore, for all the reasons set forth above, Applicants submit the combination of Reshef in view of Pettey fails to teach all of the features recited in claim 1. Thus, the Final Office Action fails to state a *prima facie* case of obviousness.

Independent claim 5 of the present invention, which is representative of independent claim 14 with regard to similarly recited subject matter, recites:

> 5. A computer implemented method for facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure, the method comprising:
>
> initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure;
>
> receiving a command from the InfiniBand host system;
>
> translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping; and
>
> performing the command.

Reshef does not teach or suggest the features recited in claim 5. Claim 5 is directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Claim 5 utilizes an InfiniBand translation bridge. Reshef does not teach an InfiniBand host system, a device with an internal InfiniBand bus structure, an InfiniBand translation bridge, or facilitating communication between the InfiniBand host system and the device with an internal InfiniBand bus structure. Instead, Reshef teaches a security gateway between an untrusted computer system and a trusted computer system that also converts received messages into a simplified form for the trusted computer system to use. Reshef does not teach the features of "initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure," and "translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping."

The Final Office Action points to column 3, line 60 through column 4, line 3, which is reproduced below for the Examiner's convenience, as teaching initiating a translation mapping, wherein the translation mapping associates external command addresses with internal device addresses:

> These and other objects of the invention are achieved by a security gateway system positioned between an external, untrusted computing environment and an internal, trusted computing environment that converts messages received from the external environment into simplified messages and converts the simplified messages into messages suitable for use on the internal environment. The conversion involves the removal of external environment transfer protocols and the reduction of the content of the messages left after removing the protocols into a simplified representation of the content to create a simplified messages.

Reshef, column 3, line 60 through column 4, line 3.

The above cited portion of Reshef teaches converting messages received from an untrusted external source into a simplified form and then translating the simplified message into a message suitable for use in an internal environment. Nothing in the above cited passage teaches a translation mapping that associates external command addresses to internal device addresses.

The Final Office Action points to column 1, lines 59 through 61 and column 13, lines 9 though 18, which is reproduced below for the Examiner's convenience, as teaching translating a destination local identifier of the command to a destination local identifier for the device and sending the command to the device associated with the translated address, as determined by the translation mapping:

> Dual-homed firewalls perform network address translation and filtering on data packets at the network level, e.g., TCP/IP packets.

Reshef, column 1, lines 59 through 61.

> For example, when a user invokes a CGI script on the web-server 12 using a CGI request encapsulated in HTTP transfer protocol, and the CGI script translates that request into an application format, e.g. SQL or banking, the web-server **12** transmits the application format back (e.g. SQL query, banking command) to the network-security gateway **10**, where the web proxy ***2f*** receives it and removes the TCP/IP encapsulation of the application data in step **94**, before sending the application data to the routing manager ***2b***.

Reshef, column 13, lines 9 through 18.

The above cited portion of Reshef, column 1, lines 59 through 61, teaches network address translation. The passage of Reshef, column 13, lines 9 though 18, teaches translating requests from one language into another language. Neither passage of Reshef teaches translation mapping nor do the passages teach translating a destination local identifier of the command to a destination local identifier for

the device and sending the command to the device associated with the translated address, as determined by the translation mapping.

Pettey does not cure the deficiencies of Reshef. Pettey does not teach the features missing from Reshef including "initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure," and "translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping." Pettey teaches architecture of an InfiniBand host channel adapter that deals with how the data is passed through an InfiniBand to PCI host channel adapter without the need for double buffering the data, which makes the data transfer more efficient. The Final Office Action cites Pettey for the purpose of teaching an InfiniBand host system and an InfiniBand translation bridge. The Final Office Action cites the same section of Pettey, column 3, lines 29 through 33 as teaching an InfiniBand host system and an InfiniBand translation bridge, as was discussed above in regards to claim 1. The previously cited passage does teach an InfiniBand host system. However, the passage does not teach a translation bridge as a translation bridge includes isolation logic and mapping tables. The Final Office Action does not cite any portion of Pettey as teaching "initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure," or "translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping."

Furthermore, as discussed above regarding claim 1, the Final Office Action fails to provide a motivation for combining the cited references and modifying them to reach the presently claimed invention. Additionally, as discussed above in regards to claim 1, no motivation exists to combine the cited references and modify them in such a manner as to form the presently claimed invention.

Therefore, for all the reasons set forth above, Applicants submit the combination of Reshef in view of Pettey fails to teach all of the features recited in claim 5. Thus, the Final Office Action fails to state a *prima facie* case of obviousness.

Therefore, for all the reasons set forth above, Applicants submit that neither Reshef, Pettey, nor the combination of Reshef in view of Pettey teaches the presently claimed invention as recited in claims 1, 5, 10, and 14. Claims 7 and 16 depend from independent claims 5 and 14. As such, Applicants submit

that claims 7 and 16 are also patentable over the combination of the cited references, at least by virtue of their depending from an allowable claim.

Furthermore, claims 7 and 16 recite other additional combinations of features not suggested by the combination of the references. Claims 7 and 16 recite the feature of "sending a command completed message to the InfiniBand host system, wherein the message appears to originate from the InfiniBand translation bridge." Such a feature is not taught or suggested by the combination of Reshef in view of Pettey. The Final Office Action does not point to any passage of Reshef or Pettey as teaching this feature.

Furthermore, as discussed above regarding claim 1, the Final Office Action fails to provide a motivation for combining the cited references and modifying them to reach the presently claimed invention. Additionally, as discussed above in regards to claim 1, no motivation exists to combine the cited references and modify them in such a manner as to form the presently claimed invention.

Therefore, the rejection of claims 1, 5, 7, 10, 14, and 16 under 35 U.S.C. § 103 has been overcome.

II. **35 U.S.C. § 103, Obviousness: Claims 2, 4, 8, 11, 13 and 17**

The Examiner has rejected claims 2, 4, 8, 11, 13 and 17 under 35 U.S.C. § 103 as being unpatentable over Reshef and Pettey in view of Catiller et al., Data Communications Network, U.S. Patent No. 4,428,043, January 24, 1984 (hereinafter "Catiller"). This rejection is respectfully traversed.

The Final Office Action states:

> a. As per claims 2 and 11, Reshef does not explicitly teach: sending a message to the external subnet indicating a completion status of the command. However, Catiller discloses: "By using an I10 descriptor command and a data link task identifier, a main host computer can initiate a network support processor to receive data from a selected remote terminal or to send data to a selected remote terminal, after which the network support processor will provide a result descriptor message together with a task identifier word in order to notify the main system of the completion or incompletion of that particular task," (lines 12-20 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to send a message to the external subnet indicating a completion status of the command. "The main host computer operates on a routine whereby I/0 commands are conveyed to a front-end processor for execution after which the front-end processor will return a "result descriptor" word or words to the main computer in order to indicate completion of the task or any exception conditions," (lines 10-16 of column 6 in Catiller). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to send a message to the external subnet indicating a completion status of the command in the system as taught by Reshef and Pettey.

Final Office Action dated April 7, 2006, page 5.

Claims 2, 4, 11 and 13 are dependent claims depending from amended independent claims 1 and 10. As was discussed above, neither Reshef, Pettey nor the combination of Reshef in view of Pettey

teaches the features of amended independent claims 1 and 10. Catiller does not cure the deficiencies of the combination of Reshef in view of Pettey. Catiller still does not teach all the claim limitations in claims 1 and 10, including "pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands;" and "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure." The Final Office Action does not point to any portion of Catiller as teaching these features, nor does any portion of Catiller teach or suggest these features. Claims 1 and 10 are directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Catiller teaches forming a network support processor to execute data transfer for up to four main computers.

Claims 8 and 17 are dependent claims depending from amended independent claims 5 and 14. As was discussed above, neither Reshef, Pettey nor the combination of Reshef in view of Pettey teaches the features of amended independent claims 5 and 14. Catiller does not cure the deficiencies of the combination of Reshef in view of Pettey. Catiller still does not teach all the claim limitations in claims 5 and 14, including "initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure," and "translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping." The Final Office Action does not point to any portion of Catiller as teaching these features, nor does any portion of Catiller teach or suggest these features. Claims 5 and 14 are directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Catiller teaches forming a network support processor to execute data transfer for up to four main computers.

Therefore, for the reasons set forth above, Applicants submit that the combination of Reshef in view of Pettey and further in view of Catiller does not teach all the features of amended independent claims 1, 5, 10, and 14. Thus, at least by their virtue of depending from allowable claims, Applicants submit the dependent claims 2, 4, 8, 11, 13, and 17 are also allowable over the combination of Reshef in view of Pettey and further in view of Catiller.

Furthermore, claims 2 and 11 recite other additional combinations of features not suggested by the combination of the references. Claims 2 and 11 recite the feature of "sending a command completed message to the InfiniBand host system, wherein the message appears to originate from the InfiniBand isolation bridge." Such a feature is not taught or suggested by the combination of Reshef in view of

Pettey further in view of Catiller. The Final Office Action points to a portion of Reshef, column 6, lines 10 through 16 as teaching sending a command completed message. However, claims 2 and 11 recite "sending a command completed message to the InfiniBand host system, wherein the message appears to originate from the InfiniBand isolation bridge." Reshef does not teach wherein the message appears to originate from the InfiniBand isolation bridge. Furthermore, neither Pettey nor Catiller teaches "sending a command completed message to the InfiniBand host system, wherein the message appears to originate from the InfiniBand isolation bridge."

Therefore, for the reasons set forth above, Applicants submit that the combination of Reshef in view of Pettey and further in view of Catiller do not teach all the features of amended independent claims 1, 5, 10, and 14. Thus, at least by their virtue of depending from allowable claims, Applicants submit the dependent claims 2, 4, 8, 11, 13, and 17 are also allowable over the combination of Reshef in view of Pettey and further in view of Catiller.

Therefore, the rejection of claims 2, 4, 8, 11, 13, and 17 under 35 U.S.C. § 103 has been overcome.

III. 35 U.S.C. § 103, Obviousness: Claims 3, 9, 12, and 18

The Examiner has rejected claims 3, 9, 12, and 18 under 35 U.S.C. § 103 as being unpatentable over Reshef and Pettey in view of Catiller and Nielson et al., Fault Tolerant Memory System Which Utilizes Data from a Shadow Memory Device upon the Detection of Erroneous Data in a Main Memory Device, U.S. Patent No. 5,619,642, April 8, 1997 (hereinafter "Nielson"). This rejection is respectfully traversed.

The Final Office Action states:

> As per claims 3, 9, 12, and 18, Reshef does not explicitly teach: the method is performed in an endnode that originated and finally consumes messages in a system area network. However, Catiller discloses: "By using an I/O descriptor command and a data link task identifier, a main host computer can initiate a network support processor to receive data from a selected remote terminal or to send data to a selected remote terminal, after which the network support processor will provide a result descriptor message together with a task identifier word in order to notify the main system of the completion or incompletion of that particular task," (lines 12-20 of column 4). It would have been obvious to one of ordinary skill iri the art at the time of the applicant's invention to have the method performed in an endnode that originates and finally consumes messages in a system area network. "The main host computer operates on a routine whereby 110 commands are conveyed to a front-end processor for execution after which the front-end processor will return a "result descriptor" word or words to the main computer in order to indicate completion of the task or any exception conditions," (lines 10-16 of column 6 in Catiller). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the method performed in an endnode that originates and finally consumes messages in a system area network in the system as taught by Reshef and Pettey.

> Reshef does not explicitly teach: the command is a RAID read/write command. However, Nielson discloses: "Under the control of the resident processor (not shown) the bus interface 20a is conditioned to accept RAID commands, e.g. a RAID write request or a RAID read request," (lines 27-30 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have the command be a RAID read/write command. "The resident processor controls the components of the RAID controller based on the received request. For example, when a RAID write request is received, the bus interface 20a, and RAM controller 40a are conditioned to accept the received write data; and place it in the main RAM 60 and shadow RAM 80," (lines 30-35 of column 4 in Nielson). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to have the command be a RAID read/write command in the system as taught by Reshef and Pettey.

Final Office Action dated April 7, 2006, pages 6-8.

Dependent claims 3, 9, 12, and 18 depend from amended independent claims 1, 5, 10, and 14, respectively. As was discussed above, the combination of Reshef in view of Pettey further in view of Catiller fail to teach the features recited in claims 1, 5, 10, and 14. Nielson does not cure the deficiencies of the combination of Reshef in view of Pettey further in view of Catiller. Nielson does not teach the features missing from the combination of Reshef in view of Pettey further in view of Catiller for claims 1 and 10 including "pre-posting command buffers to an InfiniBand isolation bridge, wherein the buffers contain external small computer system interface commands," and "translating the command from an InfiniBand host system command to a command for the device with an internal InfiniBand bus structure to form a translated command, and sending the translated command to the device with an internal InfiniBand bus structure." The Final Office Action does not point to any passage of Nielsen as teaching these features nor does any passage of Nielsen teach or suggest these features. Claims 1 and 10 are directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Instead, Nielson teaches a fault tolerant memory system.

Additionally, Nielson does not teach the features missing from the combination of Reshef in view of Pettey further in view of Catiller for claims 5 and 14 including "initiating a translation mapping to an InfiniBand translation bridge, wherein the translation mapping associates external command addresses with the device with an internal InfiniBand bus structure," and "translating a destination local identifier of the command to a destination local identifier for the device with an internal InfiniBand bus structure to form a translated address and sending the command to the device with an internal InfiniBand bus structure associated with the translated address, as determined by the translation mapping." The Final Office Action does not point to any passage of Catiller as teaching these features, nor does any passage of Catiller teach or suggest these features. Claims 5 and 14 are directed towards facilitating communication between an InfiniBand host system and a device with an internal InfiniBand bus structure. Nielson teaches a fault tolerant memory system.

Therefore, for the reasons set forth above, Applicants submit that the combination of Reshef in view of Pettey further in view of Catiller and further in view of Nielson do not teach all the features of amended independent claims 1, 5, 10, and 14. Thus, at least by their virtue of depending from allowable claims, Applicants submit that dependent claims 3, 9, 12, and 18 are also allowable over the combination of Reshef in view of Pettey further in view of Catiller and further in view of Nielson.

Therefore, the rejection of claims 3, 9, 12, and 18 under 35 U.S.C. § 103 has been overcome.

IV. 35 U.S.C. § 103, Obviousness: Claims 6 and 15

The Examiner has rejected claims 6 and 15 under 35 U.S.C. § 103 as being unpatentable over Reshef and Pettey in view of Nielson. This rejection is respectfully traversed.

The Final Office Action states:

> As per claims 6 and 1 5, Reshef does not explicitly teach: the internal device is a RAID storage controller. However, Nielson discloses: "The resident, processor controls the components of the RAID controller based on the received request," (lines 30-32 of column 4). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize a RAID storage controller as an internal device. "For example, when a RAID write request is received, the bus interface 20a, and RAM controller 40a are conditioned to accept the received write data, and place it in the main RAM 60 and shadow RAM 80," (lines 32-35 of column 4 in Nielson). It is for this reason that one of ordinary skill in the art at the time of the applicant's invention would have been motivated to utilize a RAID storage controller as an internal device in the system as taught by Reshef and Pettey.

Final Office Action dated April 7, 2006, page 8.

As discussed above, Nielson does not cure the defects of Reshef in view of Pettey further in view of Catiller in regards to amended independent claims 5 and 14. As such, Nielson does not cure the deficiencies of the combination of Reshef in view of Pettey in regards to amended independent claims 5 and 14. Therefore, as claims 6 and 15 are dependent claims depending from amended independent claims 5 and 14, Applicants submit that at least by their virtue of depending from allowable claims, dependent claims 6 and 15 are also allowable.

Therefore, the rejection of claims 6 and 15 under 35 U.S.C. § 103 has been overcome.

V. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: June 7, 2006

Respectfully submitted,

James O. Skarsten

James O. Skarsten
Reg. No. 28,346
Yee & Associates, P.C.
P.O. Box 802333
Dallas, TX 75380
(972) 385-8777
Attorney for Applicants

JOS/bj